

REMARKS

Claims 1-3, 8-13, 18-23, 28-32, 37-42, 47-52, and 57-60 remain in the application. Claims 4-7, 14-17, 24-27, 33-36, 43-46, 53-56, and 61-64 are cancelled.

The Examiners objections to Claims 30, 40,50 and 59 are maintained.

Claims 1-7, 9-17, 19-36, 38-46, 48-59 and 61-64 have been rejected under 35 U.S.C. § 102(b) as anticipated by Morgana U.S. Patent No. 6,377,711 ("Morgana").

Claims 8, 18, 37 and 47 have been rejected under 35 U.S.C. § 103(a) as obvious over Morgana and Geurts et al. U.S. Patent Publication No. 2001/0055130 ("Geurts").

Claim 60 has been rejected under 35 U.S.C. § 103(a) as obvious over Morgana and Nhu U.S. Patent No. 5,848,224 ("Nhu").

Rejection under 35 U.S.C. 112, second paragraph

Claims 5-7, 15-17,25-27,34-36,44-46, and 54-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner stated::

Claims 5-7, 15-17,25-27,34-36,44-46 and 54-56 recite the limitations of "determining a sum of magnitude of differences" in claims 5, 15,25, 34, 44 and 54; "determining a magnitude of a sum of differences" in claims 6, 16,26,35,45 and 55; and "determining a difference between a sum of magnitude of differences" in claims 7, 17, 26, 36, 46 and 56, such limitations have not been explicitly

depicted with sufficient descriptions in each of the instant claim to clearly distinguish from one and another. The scopes of such limitations are unable to be differentiated and determined since the limitations have not depicted with sufficient differentiating descriptions in each of the claim.

In response, the independent Claims 1, 11, 21, 30, 40, 50, have been amended to include determining values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixels. Independent Claim 59 has been amended to include a first logic element adapted to sum magnitudes of the differences associated with each of the surrounding pixels and subtract therefrom a magnitude of a sum of the differences associated with each of the surrounding pixels; References to various difference components have been deleted. Therefore it is believed that the confusion regarding indefiniteness has been overcome. The claims as amended are supported in the Applicant's specification and drawings, as previously noted. Applicants respectfully submit that the existing claim language is clear. Embodiments of the claimed invention may be found at least at page 10, line 25 through page 11, line 15. Examples showing determination of the trigger function values are illustrated in Applicant's FIGS. 7 and 8 and specification on page 11. Accordingly, applicants respectfully request that the Examiner withdraw the § 112, second paragraph rejections of these claims.

Rejection under 35 U.S.C. 102(b)

Claims 1-7,9-17,19-36,38-46,48-59 and 61-64 are rejected under 35 U.S.C. 102(b) as being anticipated by Morgana (U.S. Patent No. 6,377,711).

The Examiner stated:

With regard to claim 1, the claim is drawn to a method for electronically trapping a first digital color image pixel comprising a plurality of colorant values (See Morgana. i.e. "Abstract", disclose the trapping methods and systems), the method comprising: identifying a plurality of pixels that surround the first pixel (i.e. Figure 9, Step S110), each of the surrounding pixels comprising a plurality of colorant values (i.e. Figure 9, Step S140 & Step S190, "first & second pixels" adjacent (or "surrounding") the target pixel (or "the first pixel" in claim 1)); comparing a colorant value of each of the surrounding pixels with a corresponding colorant value of the first pixel; identifying one of the surrounding pixels to control trapping of the first pixel (i.e. Figure 9, Step S160); and trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel (i.e. Figure 9, Step S250).

Rejection under 35 U.S.C. 103(a)

Claims 8.18.37 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgana as applied to claims 1-7, 9-17, 19-36, 38-46, 48-59 and 61-64 above, and further in view of Geurts et al (U.S. Pub. No. 200110055130).

Response to Anticipation and Obviousness Rejections

In response to the Examiner's anticipation and obviousness rejections, the Applicant responds that independent claim 1, 11, 21, 30, 40, and 50 recite methods and apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values. The methods and apparatus include: (1) identifying a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values; (2) comparing a colorant value of each of the surrounding pixels

with a corresponding colorant value of the first pixel, wherein comparing further comprises determining a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixels; (3) identifying one of the surrounding pixels to control trapping of the first pixel; and trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

Applicant's Claim 59 discloses an apparatus for electronically trapping a first digital color image pixel comprising a plurality of colorant values. The apparatus includes a memory adapted to store a plurality of pixels that surround the first pixel, each of the surrounding pixels comprising a plurality of colorant values. A first logic element is adapted to sum magnitudes of the differences associated with each of the surrounding pixels and subtract therefrom a magnitude of a sum of the differences associated with each of the surrounding pixels. (See Applicant's Equation 2). A second logic element is adapted to determine the surrounding pixel associated with the sum from the first logic element. A third logic element is adapted to trap the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the surrounding pixel determined by the second logic element.

The cited Morgana reference does not disclose all of the elements of the independent claims. Morgana discloses and is limited to a trapping process that uses diagonal edge detection, in which a target pixel is selected and in which two diagonally adjacent pixels are selected. Edge detection is then performed using these three pixels and conventional trapping is performed, if necessary. Morgana does not disclose 1) identifying a plurality of pixels that surround the first pixel, each of the

surrounding pixels comprising a plurality of colorant values; (2) comparing a colorant value of each of the surrounding pixels with a corresponding colorant value of the first pixel, wherein comparing further comprises determining a difference between a sum of magnitudes of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixel, and a magnitude of a sum of differences between colorant values of each of the surrounding pixels and corresponding colorant values of the first pixels; (3) identifying one of the surrounding pixels to control trapping of the first pixel; and trapping the first pixel based on a relationship between a colorant value of the first pixel and a corresponding colorant value of the identified controlling pixel.

The Examiner has repeated pages and pages of rejections verbatim, apparently without serious consideration of the fair teaching of the cited Morgana reference and of the Applicant's analysis of that cited reference. The definiteness rejections are very difficult to understand. The impact of the lack of disclosure of critical claimed elements in the cited reference appears to be minimized, if not ignored. In spite of these tactics, Applicant's analysis still reveals that the independent claims are neither anticipated nor obvious because of the deficiencies of the cited Morgana reference.

CONCLUSION

Applicant respectfully believes that the pending amended independent Claims 1, 11, 21, 30, 40, 50, and 59 are distinguished from the art of record and are in condition for allowance. The dependent claims are also believed to be in condition for allowance. All rejections of the claims have been overcome. Applicant believes that the claims remaining in the Application are in condition for allowance. Accordingly, Applicants respectfully request allowance of independent Claims 1, 11, 21, 30, 40, 50, and 59, as amended, as well as the claims depending therefrom. If the Examiner would like to discuss this matter, Applicant's attorney, Michael A. Glenn, can be reached at 650-474-8400.

Respectfully submitted,



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